of flowing plating solution comprises flowing said solution from the bottom of said tank to the top of said tank.

A2 21. (new) The method of Claim 18, wherein said step of supporting said wafer comprises swinging one of said plurality of rollers out of position, loading said wafer on the remaining rollers in said plurality, and then swinging said roller back into position.

REMARKS

Reconsideration of the above-referenced application in view of the following remarks is respectfully requested.

Claims 1-11 are pending in this application. Claims 6-11 have been withdrawn from consideration and have now been cancelled. Claim 1 has been amended to better define the scope of the claimed invention. New Claims 12-21 have been added.

Claims 1-5 stand rejected under 35 U.S.C. 102(b) as being anticipated by Shacham-Diamand, et al. (U.S. Patent No. 5,830,805). Claim 1, as amended, includes the steps of "maintaining a plurality of said wafers approximately parallel to each other at predetermined distances by supporting an edge of each said wafer between a plurality of support means" and "rotating each of said wafers at constant speed and synchronously with each other by turning each of said plurality of support means." Shacham-Diamand does not teach or suggest such steps. Therefore, Applicant respectfully submits that Claim 1, and Claims 2-5 which depend therefrom, are patentable over Shacham-Diamand.

New Claim 12 includes the steps of "supporting said wafer with a plurality of support means" and "rotating said wafer by rotating each of said plurality of support means." Shacham-Diamand does not teach or suggest such steps.

New Claim 18 includes the step of "supporting said wafer with a plurality of parallel rollers, each of said rollers having grooves for supporting an edge of said wafer." Shacham-Diamand does not teach or suggest such a step. For at least these reasons, Applicant respectfully submits that Claims 12 and 18, and Claims 13-17 and 19-21 which depend therefrom, are patentable over Shacham-Diamand.

Applicant respectfully requests reconsideration and withdrawal of the rejections and allowance of Claims 1-5 and 12-21. If the Examiner has any questions or other correspondence regarding this application, Applicant requests that the Examiner contact Applicant's attorney at the below listed telephone number and address.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (amended) A method for controlled electroless plating of uniform metal layers onto exposed metallizations in integrated circuits positioned on the active surface of semiconductor wafers, comprising the steps of:

maintaining a plurality of said wafers approximately parallel to each other at predetermined distances by supporting an edge of each said wafer between a plurality of support means;

immersing said wafers into an electroless plating solution flowing in laminar motion at constant speed substantially parallel to said active surface of said wafers;

rotating each of said wafers at constant speed and synchronously with each other by turning each of said plurality of support means; and

creating periodic relative motion in changing directions between said plating solution and said wafers, thereby uniformly plating layers onto said exposed metallizations by controlled electroless deposition.

Please add the following new claims:

12. (new) A method of electroless plating of features on a semiconductor wafer, comprising the steps of:

supporting said wafer with a plurality of support means;

rotating said wafer by rotating each of said plurality of support means; and

flowing plating solution over the surface of said wafer.

13. (new) The method of Claim 12, wherein said step of supporting said wafer comprises supporting said wafer with a plurality of rollers.

14. (new) The method of Claim 13, wherein said step of supporting comprises supporting said wafer in a groove in each of said rollers in said plurality.

15. (new) The method of Claim 12, wherein said step of rotating said wafer comprises turning a gear on each of said support means by turning a central sun gear engaged with said gear on each of said support means.

16. (new) The method of Claim 12, further comprising the step of immersing said wafer and said support means in said plating solution.

17. (new) The method of Claim 16, wherein said step of immersing said wafer comprises immersing said wafer and said support means in a tank and said step of flowing plating solution comprises flowing said solution from the bottom of said tank to the top of said tank.

18. (new) A method of electroless plating of features on a semiconductor wafer, comprising the steps of:

supporting said wafer with a plurality of parallel rollers, each of said rollers having grooves for supporting an edge of said wafer;

immersing said wafer and said rollers in plating solution;

rotating said wafer by rotating said parallel rollers; and

flowing plating solution over the surface of said wafer during said step of rotating said wafer.

19. (new) The method of Claim 18, wherein said step of rotating said wafer comprises turning a gear on each of said support means by turning a central sun gear engaged with said gear on each of said support means.

20. (new) The method of Claim 18, wherein said step of immersing said wafer comprises immersing said wafer and said support means in a tank and said step of flowing plating solution comprises flowing said solution from the bottom of said tank to the top of said tank.

21. (new) The method of Claim 18, wherein said step of supporting said wafer comprises swinging one of said plurality of rollers out of position, loading said wafer on the remaining rollers in said plurality, and then swinging said roller back into position.